

## **6. OTHER ACTIVITIES INCLUDING SUBSISTENCE, FISHING, RECREATION, AND HOBBIES**

Participation in certain types of activities can increase an individual's risk of exposure to environmental contaminants. Examples of these activities are subsistence fishing, hunting, gardening, recreation, or hobbies. Persons who fish and/or hunt for subsistence, cultural reasons, or recreation and then consume the animals caught could potentially be exposed to contaminants originally ingested by the animals. The habitat in which the animals lived is also important to consider when assessing contaminant exposure. Bottom-feeding fish (e.g., catfish) have greater exposure and higher body burdens of those contaminants found in sediments. Other common recreational activities, such as gardening, home maintenance/ repair, hobbies, and crafts, also can result in increased exposure to environmental contaminants. Gardeners may have greater exposure to pesticides and other chemicals due to dermal contact with soil and treated plants. Depending on the task involved, persons active in home maintenance/repair, hobbies, and crafts can be exposed to many chemicals, including paints, varnishes, solvents, and adhesives. This section presents estimates of the general U.S. population participating in various recreational activities that may increase exposure to environmental contaminants.

It should be noted that participation in an activity in which food items can be obtained, such as hunting, fishing, or gardening, does not necessarily mean that the individual participating is consuming the food items. Intake rates are presented in the Exposure Factors Handbook for the following food groups: fruits and vegetables (Section 9); fish (Section 10); meat and dairy products (Section 11); grain products (Section 12); home produced foods (Section 13); and breast milk (Section 14).

### **6.1. FISHING AND HUNTING**

The National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (U.S. DOI and U.S. DOC, 1993) was designed to provide estimates of the numbers of U.S. residents who participated in recreational hunting and fishing and other forms of wildlife-related activities known as nonconsumptive use in all 50 States and the District of Columbia. The survey was conducted

in two phases by the U.S. Bureau of the Census for the Fish and Wildlife Service. In the first phase, a nationwide sample of 129,500 households was interviewed over the telephone between January and February 1991. Information on household members 6 years old and older who had fished, hunted, or engaged in a nonconsumptive wildlife-related activity in 1990 and who planned to engage in these activities in 1991 were obtained from the interviews. A national response rate of 95.2% was achieved from eligible households. The second phase of the survey consisted of three detailed interviews conducted quarterly from May 1991 to March 1992 with subsamples of anglers, hunters, and nonconsumptive use participants identified in the first phase. Respondents in this phase of the survey were 16 years old and older. The survey was designed to provide State-level fishing, hunting, and nonconsumptive activities for 23,179 anglers and hunters and 22,723 nonconsumptive use participants. Sportsmen were defined in the survey as those who fish and hunt, fish only, or hunt only. Anglers were defined as licensed or unlicensed sportsmen who fish only or fish and hunt. Hunters were defined as licensed and unlicensed sportsmen who hunt only or hunt and fish. Assessors should be aware that the possibility of undersampling exists with telephone surveys (e.g., households without a telephone will not be sampled). The survey revealed that 108.7-million U.S. residents, 16 years old and older participated in some form of wildlife-related recreation activity in 1991. During that year, 35.6-million people in the United States fished, 14.1 million hunted, and 76.1-million had at least one type of nonconsumptive recreation activity involving wildlife as the primary purpose.

Results of the survey for persons 16 years and older are summarized in Tables 6-1 through 6-13. Table 6-1 shows the population estimates of anglers and hunters who participated in the survey, grouped by fishing and hunting activity and days of participation. Table 6-2 presents the angler population, grouped by fishing waterbody and days of fishing. Tables 6-3, 6-4, and 6-5 present freshwater angler, Great Lakes angler, and saltwater angler populations, grouped by types of fish caught and number of days fishing. Table 6-6 presents population estimates for hunters, grouped by type of hunting (i.e., big game, small game, migratory bird, other animals) and by State of residence. Tables 6-7, 6-8, 6-9, and 6-10 present population estimates for hunters of big game, small game, migratory birds, and other animals, respectively, grouped by type of game. Table 6-11 presents demographic characteristics of anglers and hunters, grouped by total

population, sportsmen, those who fished only, those who hunted only, and those who fished and hunted. Table 6-12 presents demographic characteristics of anglers 16 years and older by type of fishing. Table 6-13 presents demographic characteristics of hunters 16 years old and older by type of hunting. Table 6-14 presents demographic characteristics (i.e., age, sex, race, household income, and geographic location) of anglers and hunters 6 to 15 years old, grouped by total population, sportsmen, and those who fished only, hunted only, and fished and hunted in 1990. Table 6-15 presents population estimates of anglers and hunters ages 6 to 15 years old by sportsman's State of residence in 1990. Readers are reminded that the data in these tables present participation rates, not actual consumption rates. Consumption rates can be found in the *Exposure Factors Handbook* for the following: fish (Section 10) and meats (Section 11).

It is possible to further estimate populations involved in these activities by combining demographic census data from Section 2 in this document with the information provided in the handbook tables. As an example, Table 6-12 (U.S. DOI and U.S. DOC, 1993) does not include the number of freshwater anglers residing in New England who are black; however, this can be estimated from the data presented. Table 6-12 indicates that 1,188,000 freshwater anglers are in the New England Census geographic division. If that number is multiplied by the percentage of the population in that area who are black (5 percent) the resulting value of 59,400 provides an estimate of black freshwater anglers in New England.

## **6.2. HOME GARDENING**

Ingestion of contaminated food is a potential pathway of human exposure to toxic chemicals. Local site contamination may lead consumers of home-produced food products to be at greater exposure risk. In addition, incomplete cleaning/preparation of produce may leave a residue of pesticides and other chemicals on the fruits and vegetables grown and prepared in private homes.

According to the Home and Garden Survey conducted by the National Gardening Association (1987), a total of 34-million (38%) U.S. households participated in vegetable gardening in 1986. Table 6-16 contains demographic data on vegetable gardening in 1986 by region/section, community size, and household size. Table 6-17 presents characteristics of

households that had a vegetable garden. Table 6-18 contains information on the types of vegetables grown by home gardeners in 1986. Tomatoes, peppers, onions, cucumbers, lettuce, beans, carrots, and corn are among the vegetables grown by the largest percentage of gardeners. As previously stated, readers are reminded that the data in these tables present participation rates, and not actual consumption rates. Consumption rates for home-produced foods can be found in the *Exposure Factors Handbook*, Section 13.

The U.S. Bureau of the Census (1995) collects data on various recreational and leisure time activities based on sample surveys from several sources. Statistics on U.S. household participation in lawn and garden activities from 1989 to 1993 are presented in Table 6-19. In 1990, 80% of U.S. households engaged in lawn and garden activities, compared with 71% in 1993. Table 6-20 presents the percentage of the U.S. population who participated in gardening in 1992 grouped by gender, race, age, and education. As shown in Table 6-20, 55% of the population participated in gardening in 1992. This represents an increase of 17% over the 1986 figures previously referenced.

### **6.3. DO-IT-YOURSELFERS**

The Do-It-Yourselfers Research Institute (1983) conducted a study of the home improvement and repair do-it-yourselfers (DIY) market in September 1982. The study design provided a comprehensive profile of DIY consumers with particular emphasis on their shopping orientation, buying habits, and lifestyles. Telephone interviews were conducted with 2,000 consumers who were randomly selected throughout the United States. The survey determined that for 1982, 73.5% of all U.S. households could be considered “do-it-yourselfers.” DIY households were defined as households with the household members involved with home improvement and repair activities. The population data obtained were based on estimated 1982 census figures. Table 6-21 presents the population estimates of DIY home improvement and repair projects undertaken between September 1981 and September 1982.

The U.S. Bureau of the Census (1995) presents the percentage of the U.S. population who participated in home improvement/repair in 1992. Table 6-22, which presents the percentage of the population grouped by gender, age, race, and education, indicates that 48% of the

population participated in home improvement/repair during 1992. This represents a decrease of 25.5% over the 1982 figures previously referenced.

#### **6.4. HOBBYISTS**

Individuals participating in certain hobbies and crafts (e.g., model building) may have an increased risk of exposure to certain chemicals in the products they use. Typically, these products, which include solvents, adhesives, paints, and varnishes, may be used in greater volumes and frequencies by specific populations resulting in higher levels of exposure to chemicals found in the products (U.S. EPA, 1985). Table 6-23 lists the hobbies that could potentially increase an individual's exposure to chemicals and the population estimates associated with these hobbies.

#### **6.5. EXERCISE/SPORT ACTIVITIES**

Participation in exercise and sporting activities can influence one's exposure to environmental contaminants. People engaging in outdoor exercise may experience greater than expected exposures to air pollutants due to increased respiration rates. These athletes are also likely to have increased water consumption rates, thereby increasing exposure to drinking water contaminants. Also, participation in water sports such as swimming may lead to increased exposure to trihalomethanes (THMs) from the chlorination of swimming pools.

The U.S. Bureau of the Census (1995) gathered data from the National Sporting Goods Association on participation of the U.S. population in various recreational sports activities. Table 6-24 presents the total numbers of the U.S. population who participated in selected sports activities in 1993 grouped by gender, age, and household income. Figure 6-1 shows the percent of population 7 years old and older who participated in the 10 most popular sports activities grouped by gender in 1993. Figure 6-2 shows the percentage of the population 18 years and older participating in various activities in 1992 including exercise, playing sports, various outdoor activities, home improvement, and gardening.

## **6.6. REFERENCES**

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Table 6-1. Anglers, Hunters, Days of Participation, and Trips, by Type of Fishing and Hunting: 1991  
 [Population 16 years old and older. Numbers in thousands.]

Type of Game	Participants		Days of Participation		Trips	
	Number	Percent	Number	Percent	Number	Percent
Total Sportsmen	39,979	100	747,135	100	668,327	100
Fishing						
Total, all fishing	35,578	100	511,329	100	453,951	100
Total, all freshwater	31,041	87	439,536	86	389,843	86
Freshwater, except Great Lakes	30,186	85	430,922	84	369,344	81
Great Lakes	2,552	7	25,335	5	20,499	5
Saltwater	8,885	25	74,696	15	64,108	14
Hunting						
Total, all hunting	14,063	100	235,806	100	214,375	100
Big game	10,745	76	128,411	54	104,224	49
Small game	7,642	54	77,132	33	72,487	34
Migratory birds	3,009	21	22,235	9	19,537	9
Other animals	1,411	10	19,340	8	18,127	8

Note: Detail does not add to total because of multiple responses.  
 These data represent activity patterns, which do not represent consumption rates. Consumption rates can be found in Exposure Factors Handbook, Sections 10 and 11.

Source: U.S. DOI and U.S. DOC, 1993.

Table 6-2. Anglers, Trips, and Days of Fishing, by Type of Fishing: 1991  
[Population 16 years old and older. Numbers in thousands.]

Anglers, Trips, and Days of Fishing	<u>Type of Fishing</u>									
	Total, All Fishing		Total, All Freshwater		Freshwater, Except Great Lakes		Great Lakes, Freshwater		Saltwater	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Anglers										
Total in U.S.	35,578	100	31,041	100	30,186	100	2,552	100	8,885	100
In state of residence	32,281	91	28,471	92	27,655	92	2,121	76	6,757	83
In other states	8,442	24	6,426	21	6,038	20	585	29	2,618	23
Trips										
Total in U.S.	453,951	100	389,843	100	389,344	100	20,499	100	64,108	100
1 day trips	398,081	88	342,438	88	324,870	88	17,568	87	55,643	86
2 or more day trips	55,870	12	47,404	12	44,473	12	2,931	13	8,466	14
Days of fishing										
Total days in U.S.	511,329	100	439,536	100	430,922	100	25,335	100	74,696	100
Days in state of residence	451,418	88	391,332	89	380,563	88	21,477	83	62,298	85
Days in other states	59,870	12	48,199	11	50,352	12	3,852	17	12,362	15
Average days per angler	14	X	14	X	14	X	10	X	8	X

Note: Detail for participants does not add to total because of multiple responses. Percent shown for anglers, trips and days of fishing are based on the respective "Total in U.S." rows. X = Not applicable. These data represent activity patterns, which do not represent consumption rates. Consumption rates can be found in Exposure Factors Handbook, Section 10.

Source: U.S. DOI and U.S. DOC, 1993.



Table 6-3. Freshwater Anglers and Days of Fishing, by Type of Fish: 1991  
 [Population 16 years old and older. Numbers in thousands. Excludes Great Lakes fishing.]

Type of Fish	Anglers		Days of Fishing		Average Days per Angler
	Number	Percent	Number	Percent	
Total, all types of fish	30,186	100	430,922	100	14
Black bass (largemouth, smallmouth, etc.)	12,857	43	158,226	37	12
White bass, striped bass and striped bass hybrids	6,408	21	63,181	315	10
Panfish	10,149	34	102,184	24	10
Crappie	8,327	28	90,940	21	11
Catfish and bullheads	9,195	30	96,451	22	10
Walleye and sauger	3,278	11	37,302	9	11
Northern pike, pickerel, muskie and muskie hybrids	2,693	9	29,327	7	11
Trout	9,107	30	81,366	19	9
Salmon	989	3	8,548	2	9
Steelhead	493	2	4,025	1	8
Anything <sup>a</sup>	4,984	17	37,744	9	8
Other freshwater fish	2,550	8	21,452	5	8

Notes: Detail does not add to total because of multiple responses.

<sup>a</sup> Respondent identified "Anything" from a list of categories of fish.

These data represent activity patterns, which do not represent consumption rates. Consumption rates for some species can be found in Exposure Factors Handbook, Section 10.

Source: U.S. DOI and U.S. DOC, 1993.

Table 6-4. Great Lakes Anglers and Days of Fishing, by Type of Fish: 1991  
[Population 16 years old and older. Numbers in thousands.]

Type of Fish	Anglers		Days of Fishing		Average Days per Angler
	Number	Percent	Number	Percent	
Total, all types of fish	2,552	100	25,335	100	10
Black bass (largemouth, smallmouth, etc.)	526	21	4,369	17	8
Walleye and sauger	1,028	40	9,489	37	9
Northern pike, pickerel, muskie, muskie hybrids	213	8	2,318	9	11
Perch	983	39	8,170	32	8
Salmon	721	28	4,622	18	6
Steelhead	289	11	2,444	10	8
Lake trout	482	19	2,980	12	6
Other trout	276	11	2,280	9	8
Anything <sup>a</sup>	371	15	2,814	11	8
Other Great Lakes fish	314	12	2,086	8	7

Notes: Detail does not add to total because of multiple responses.

<sup>a</sup> Respondent identified "Anything" from a list of categories of fish. These data represent activity patterns, which do not represent consumption rates. Consumption rates for some species can be found in Exposure Factors Handbook, Section 10.

Source: U.S. DOI and U.S. DOC, 1993.

Table 6-5. Saltwater Anglers and Days of Fishing, by Type of Fish: 1991  
[Population 16 years old and older. Numbers in thousands.]

Type of Fish	Anglers		Days of Fishing		Average Days per Anglers
	Number	Percent	Number	Percent	
Total, all types of fish	8,885	100	74,696	100	8
Salmon	783	9	4,590	6	6
Striped bass	1,117	13	7,639	10	7
Flatfish, flounder, halibut	2,302	26	16,170	22	7
Bluefish	1,915	22	12,147	16	6
Lingcod, rockcod	683	8	3,220	4	5
Seatrout	1,314	15	12,618	17	10
Sturgeon	75 <sup>a</sup>	1 <sup>a</sup>	531 <sup>a</sup>	1 <sup>a</sup>	7 <sup>a</sup>
Mackerel	881	10	5,488	7	6
Billfish (marlin, swordfish, sailfish, spearfish)	322	4	2,052	3	6
Anything <sup>b</sup>	2,831	32	17,861	24	6
Other saltwater fish	4,279	48	32,368	43	8

Notes: Detail does not add to total because of multiple responses.

<sup>a</sup> Estimate based on small sample size.

<sup>b</sup> Respondent identified "Anything" from a list of categories of fish.

These data represent activity patterns, which do not represent consumption rates. Consumption rates for some species can be found in Exposure Factors Handbook, Section 10.

Source: U.S. DOI and U.S. DOC, 1993.

Table 6-6. Hunters, Trips, and Days of Hunting, by Type of Hunting: 1991  
[Population 16 years old and older. Numbers in thousands.]

Hunters, Trips, and Days of Hunting	Total, All Hunting		Type of Hunting							
	Number	Per- cent	Big Game		Small Game		Migratory Bird		Other Animals	
			Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent
Hunters										
Total in U.S.	14,063	100	10,745	100	7,642	100	3,009	100	1,411	100
In state of residence	13,370	95	10,167	95	7,215	94	2,861	95	1,321	94
In other states	1,826	13	1,241	12	746	10	256	9	131	9
Trips										
Total in U.S.	214,375	100	104,224	100	72,487	100	19,537	100	18,127	100
1 Day trips	191,466	89	88,504	85	67,728	93	18,006	92	17,228	95
2 Day trips	22,909	11	15,720	15	4,759	7	1,531	8	899	5
Days of hunting										
Total days in U.S.	235,806	100	128,411	100	77,132	100	22,235	100	19,340	100
Days in state of residence	220,125	93	118,338	92	72,824	94	20,908	94	18,102	94
Days in other states	15,681	7	10,072	8	4,308	6	1,327	6	1,237	6
Average days per hunter	17	X	12	X	10	X	7	X	14	X

Notes: Detail does not add to total because of multiple responses. Percents shown for hunters, trips, and days of hunting are based on the representative "Total in U.S." rows.

(X) Not applicable.

These data represent activity patterns, which do not represent consumption rates. Consumption rates can be found in Exposure Factors Handbook, Sections 10 and 11.

Source: U.S. DOI and U.S. DOC, 1993.

Table 6-7. Big Game Hunters and Days of Hunting, by Type of Game: 1991  
 [Population 16 years old and older. Numbers in thousands.]

Type of Game	Hunters		Days of Hunting		Average Days per Hunter
	Number	Percent	Number	Percent	
Total, all big game	10,745	100	128,411	100	12
Deer	10,277	96	112,853	88	11
Elk	682	6	5,048	4	7
Bear	368	3	2,882	2	8
Wild turkey	1,720	16	13,483	10	8
Other	404	4	3,235	3	8

Notes: Detail does not add to total because of multiple responses.  
 These data represent activity patterns, which do not represent consumption rates. Consumption rates for some game can be found in Exposure Factors Handbook, Section 11.

Source: U.S. DOI and U.S. DOC, 1993.

Table 6-8. Small Game Hunters and Days of Hunting, by Type of Game: 1991  
 [Population 16 years old and older. Numbers in thousands.]

Type of Game	Hunters		Days of Hunting		Average Days per Hunter
	Number	Percent	Number	Percent	
Total, all small game	7,642	100	77,132	100	10
Rabbits, hares	3,980	52	35,624	46	9
Quail	1,694	22	13,511	18	8
Grouse/prairie chicken	1,375	18	10,629	14	8
Squirrels	3,569	47	29,602	38	8
Pheasant	2,285	30	16,136	21	7
Other	823	11	6,824	9	8

Notes: Detail does not add to total because of multiple responses.  
 These data represent activity patterns, which do not represent consumption rates. Consumption rates for some game can be found in Exposure Factors Handbook, Section 11.

Source: U.S. DOI and U.S. DOC, 1993.

Table 6-9. Migratory Bird Hunters and Days of Hunting, by Type of Game: 1991  
 [Population 16 years old and older. Numbers in thousands.]

Type of Game	Hunters		Days of Hunting		Average Days per Hunter
	Number	Percent	Number	Percent	
Total, all migratory birds	3,009	100	22,235	100	7
Geese	882	29	6,584	30	7
Ducks	1,164	39	8,800	40	8
Doves	1,851	61	9,480	43	5
Other	259	9	1,667	7	6

Notes: Detail does not add to total because of multiple responses.  
 These data represent activity patterns, which do not represent consumption rates. Consumption rates for some game can be found in Exposure Factors Handbook, Section 11.

Source: U.S. DOI and U.S. DOC, 1993.

Table 6-10. Hunters of Other Animals and Days of Hunting, by Type of Game: 1991  
 [Population 16 years old and older. Numbers in thousands.]

Type of Game	Hunters		Days of Hunting		Average Days per Hunter
	Number	Percent	Number	Percent	
Total, all other animals	1,411	100	19,340	100	14
Groundhog (woodchuck)	471	33	4,851	25	10
Raccoon	408	29	7,196	37	18
Fox	204	14	2,157	11	11
Coyote	427	30	4,482	23	10
Other	312	22	3,238	17	10

Notes: Detail does not add to total because of multiple responses.  
 These data represent activity patterns, which do not represent consumption rates. Consumption rates for some game can be found in Exposure Factors Handbook, Section 11.

Source: U.S. DOI and U.S. DOC, 1993.



Table 6-11. Demographic Characteristics of Anglers and Hunters  
[Population 16 years old and older. Numbers in thousands.]

Characteristic	U.S. Population		Sportsmen (Fished or Hunted)			Fished Only			Hunted Only			Fished and Hunted		
	Number	Percent	Number	Percent who partici- pated	Percent	Number	Percent who partici- pated	Percent	Number	Percent who partici- pated	Percent	Number	Percent who partici- pated	Percent
Total persons	189,964	100	39,979	21	100	25,916	14	100	4,402	2	100	9,662	5	100
Population density of residence														
Urban	138,191	73	24,378	18	61	17,747	13	68	2,010	1	46	4,621	3	48
Rural	51,773	27	15,602	30	39	8,169	16	32	2,392	5	54	5,040	10	52
Population size of residence														
MSA *	147,339	78	27,372	19	68	19,460	13	75	2,451	2	56	5,417	4	56
1,000,000 or more	81,346	43	12,515	15	31	9,444	12	36	988	1	22	2,084	3	22
250,000 - 999,999	45,601	24	9,667	21	24	6,755	15	26	863	2	20	2,048	4	21
50,000 - 249,999	20,392	11	5,146	25	13	3,261	16	13	601	3	14	1,285	6	13
Outside MSA	42,625	22	12,652	30	32	6,456	15	25	1,951	5	44	4,245	10	44
Census geographic division **														
New England	10,180	5	1,658	16	4	1,214	12	5	114	1	3	330	3	3
Middle Atlantic	29,216	15	4,508	15	11	2,763	9	11	638	2	14	1,108	4	11
East North Central	32,188	17	7,202	22	18	4,412	14	17	937	3	21	1,852	6	19
West North Central	13,504	7	4,143	31	10	2,434	18	9	496	4	11	1,213	9	13
South Atlantic	33,682	18	6,996	21	17	4,913	15	19	555	2	13	1,528	5	16
East South Central	11,667	6	2,984	26	7	1,705	15	7	349	3	8	930	8	10
West South Central	19,926	10	5,125	26	13	3,281	16	13	533	3	12	1,311	7	14
Mountain	10,092	5	2,488	25	6	1,419	14	5	409	4	9	660	7	7
Pacific	29,508	16	4,875	17	12	3,774	13	15	370	1	8	730	2	8
Age														
Total	189,964	100	39,979	21	100	25,916	14	100	4,402	2	100	9,662	5	100
16 to 17 yrs	6,530	3	1,669	26	4	1,007	15	4	188	3	4	474	7	5
18 to 24 yrs	23,023	12	5,245	23	13	3,229	14	12	652	3	15	1,364	6	14
25 to 34 yrs	42,931	23	11,046	26	28	7,115	17	27	1,117	3	25	2,813	7	29
35 to 44 yrs	38,341	20	9,553	25	24	6,185	16	24	969	3	22	2,399	6	25
45 to 54 yrs	27,021	14	5,658	21	14	3,585	13	14	764	3	17	1,309	5	14
55 to 64 yrs	21,085	11	3,682	17	9	2,505	12	10	411	2	9	765	4	8
65 yrs and older	31,032	16	3,127	10	8	2,290	7	9	300	1	7	537	2	6
Sex														
Male, total	90,369	48	29,705	33	74	16,710	18	64	3,995	4	81	9,000	10	93
16 to 17 yrs	3,385	2	1,348	40	3	715	21	3	175	5	4	457	13	5
18 to 24 yrs	11,365	6	3,865	34	10	2,023	18	8	587	5	13	1,255	11	13
25 to 34 yrs	20,791	11	8,023	39	20	4,413	21	17	990	5	22	2,620	13	24
35 to 44 yrs	18,590	10	7,050	38	18	3,938	21	15	877	5	20	2,234	12	23
45 to 54 yrs	13,289	7	4,222	32	11	2,297	17	9	708	5	16	1,216	9	13
55 to 64 yrs	9,933	5	2,834	29	7	1,732	17	7	382	4	9	720	7	7
65 yrs and older	13,017	7	2,365	18	6	1,592	12	6	274	2	6	498	4	5
Female, total	99,595	52	10,274	10	26	9,206	9	36	407	(Z)	9	661	1	7

(continued on next page)

Table 6-11. Demographic Characteristics of Anglers and Hunters (continued)  
[Population 16 years old and older. Numbers in thousands.]

Characteristic	U.S. Population		Sportsmen (Fished or Hunted)			Fished Only			Hunted Only			Fished and Hunted		
	Number	Percent	Number	Percent who partici- pated	Percent	Number	Percent who partici- pated	Percent	Number	Percent who partici- pated	Percent	Number	Percent who partici- pated	Percent
16 to 17 yrs	3,145	2	321	10	1	291	9	1	---	---	---	*** 17	*** 1	*** (Z)
18 to 24 yrs	11,659	6	1,380	12	3	1,206	10	5	65	1	1	109	1	1
25 to 34 yrs	22,140	12	3,023	14	8	2,703	12	10	127	1	3	193	1	2
35 to 44 yrs	19,751	10	2,503	13	6	2,246	11	9	92	(Z)	2	165	1	2
45 to 54 yrs	13,732	7	1,436	10	4	1,288	9	5	56	(Z)	1	93	1	1
55 to 64 yrs	11,153	6	849	8	2	774	7	3	30	(Z)	1	45	(Z)	(Z)
65 yrs and older	18,015	9	762	4	2	698	4	3	---	---	---	*** 39	*** (Z)	*** (Z)
Race														
White	162,367	85	37,026	23	93	23,454	14	90	4,250	3	97	9,323	6	96
Black	18,395	10	1,883	10	5	1,589	9	6	73	(Z)	2	221	1	2
All others	9,202	5	1,071	12	3	874	9	3	79	1	2	118	1	1
Annual household income														
Under \$10,000	18,585	10	2,228	12	6	1,555	8	6	247	1	6	426	2	4
\$10,000 to \$19,999	29,864	16	5,296	18	13	3,466	12	13	619	2	14	1,210	4	13
\$20,000 to \$24,999	15,188	8	3,302	22	8	1,980	13	8	409	3	9	913	6	9
\$25,000 to \$29,999	18,727	10	4,229	23	11	2,627	14	10	472	3	11	1,130	6	12
\$30,000 to \$49,999	42,689	22	11,626	27	29	7,336	17	28	1,278	3	29	3,012	7	31
\$50,000 to \$74,999	24,448	13	6,473	26	16	4,414	18	17	605	2	14	1,455	6	15
\$75,000 or more	13,579	7	3,121	23	8	2,174	16	8	284	2	6	663	5	7
Not reported	26,884	14	3,705	14	9	2,364	9	9	488	2	11	853	3	9
Education														
8 yrs or less	14,311	8	1,786	12	4	1,190	8	5	269	2	6	326	2	3
9 -11 yrs	21,595	11	4,730	22	12	2,995	14	12	554	3	12	1,190	6	12
12 yrs	77,293	41	16,140	21	40	9,890	13	38	1,924	2	44	4,325	6	45
1 - 3 yrs college	36,725	19	8,638	24	22	5,742	16	22	937	3	21	1,958	5	20
4 yrs college	22,920	12	5,132	22	13	3,565	16	14	413	2	9	1,155	5	12
5 or more yrs college	17,120	9	3,554	21	9	2,533	15	10	314	2	7	707	4	7

Notes: Percent who participated shows the percent of each row's population who participated in the activity named by the column (the percent of those living in urban areas who fished only, etc.). Percent columns show the percent of each column's participants who are described by the row heading (the percent of those who fished only, who lived in urban areas, etc.).

\* Metropolitan Statistical Area

\*\* States within each U.S. Census geographic region are listed in Section 2.4 of this document.

\*\*\* Estimate based on a small sample size.

--- Sample size too small to report data reliably.

(Z) Less than 0.5 percent.

These data represent activity patterns, which do not represent consumption rates. Consumption rates can be found in Exposure Factors Handbook, Section XX.

Source: U.S. DOI and U.S. DOC, 1993.

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Table 6-16. Vegetable Gardening by Demographic Factors: 1986

Demographic Factor	Percentage of total households that have gardens (%)	Number of households (in millions)
<b>Total</b>	<b>38</b>	<b>34</b>
Sex of gardener		
Male	39	16.6
Female	37	17.0
Age of gardener (in years)		
18-29	31	7.7
30-49	39	12.4
50 and older	43	13.7
Household composition		
Single, separated, divorced, or widowed	54	8.5
Married, no children	45	11.9
Married, with children	44	13.2
Region/section <sup>a</sup>		
East Region	33	7.3
New England	37	1.9
Mid-Atlantic	32	5.4
Midwest Region	50	11.0
East Central	50	6.6
West Central	50	4.5
South Region	33	9.0
Deep South	44	3.1
Rest of South	29	5.9
West Region	37	6.2
Rocky Mountain	53	2.3
Pacific	32	4.2
Size of Community		
City	26	6.2
Suburb	33	10.2
Small town	32	3.4
Rural	61	14.0

<sup>a</sup> Composition of regions/sections was not provided by the NGA.

Source: National Gardening Association, 1987.

Table 6-17. Characteristics of Households With a Vegetable Garden: 1976 to 1986  
[Percentage]

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Percent of US households with a vegetable garden	44	43	41	42	43	47	46	42	40	37	38
Number of households with a vegetable garden (in millions)	32	32	31	33	34	38	38	35	34	33	34
Garden size (square feet) <sup>a</sup>	560	770	620	595	663	547	600	505	440	300	325
<b>Characteristic</b>											
Age (in years)											
18 - 29	40	38	34	36	33	41	39	36	33	29	31
30 - 49	46	45	42	43	45	48	46	42	40	36	39
50 and older	45	46	46	46	48	51	50	46	46	44	43
Sex											
Male	52	44	42	43	44	48	49	44	40	38	39
Female	48	41	41	42	41	47	43	40	40	37	37
Race											
White	46	45	41	44	45	50	47	40	42	40	40
Nonwhite	32	39	40	30	28	32	37	28	31	20	27
Yearly income											
\$15,000 and over	48	48	49	48	48	52	50	45	42	40	40
\$10,000 - 14,999	43	43	37	41	40	44	41	43	46	37	35
\$7,000 - 9,999	42	41	32	38	37	49	41	43	33	30	38
\$4,000 - 6,999	43	39	37	30	37	37	39	28	35	25	34
Under \$4,000	32	35	34	25	31	28	36	34	27	28	42

<sup>a</sup> Median value; mean value for 1986 = 1,690 square feet.

Source: National Gardening Association, 1987.

Table 6-18. Percentage of Gardening Households Growing Different Vegetables:  
1986

Vegetable	Percent
Artichokes	0.8
Asparagus	8.2
Beans	43.4
Beets	20.6
Broccoli	19.6
Brussel sprouts	5.7
Cabbage	29.6
Carrots	34.9
Cauliflower	14.0
Celery	5.4
Chard	3.5
Corn	34.4
Cucumbers	49.9
Dried peas	2.5
Dry beans	8.9
Eggplant	13.0
Herbs	9.8
Kale	3.1
Kohlrabi	3.0
Leeks	1.2
Lettuce	41.7
Melons	21.9
Okra	13.6
Onions	50.3
Oriental vegetables	2.1
Parsnips	2.2
Peanuts	1.9
Peas	29.0
Peppers	57.7
Potatoes	25.5
Pumpkins	10.2
Radishes	30.7
Rhubarb	12.2
Spinach	10.2
Summer squash	25.7
Sunflowers	8.2
Sweet potatoes	5.7
Tomato	85.4
Turnips	10.7
Winter squash	11.1

Source: National Gardening Association, 1987.

Table 6-19. U.S. Household Participation in Lawn and Garden Activities: 1989 to 1993<sup>a</sup>

Activity	Percent Households Engaged in Activity				
	1989	1990	1991	1992	1993
Total	75	80	78	75	71
Lawn care	57	66	62	54	54
Indoor houseplants	37	43	42	34	31
Flower gardening	41	48	41	39	39
Insect control	29	39	35	27	24
Shrub care	29	38	32	27	28
Vegetable gardening	32	37	31	31	26
Tree care	23	31	27	20	21
Landscaping	22	31	26	22	24
Flower bulbs	23	31	26	23	22
Fruit trees	14	19	15	13	13
Container gardening	11	15	13	9	11
Raising transplants <sup>b</sup>	11	15	12	8	10
Herb gardening	7	9	9	7	8
Growing berries	7	9	7	6	6
Ornamental gardening	5	7	7	5	6

<sup>a</sup> Based on national household sample survey conducted by the Gallup Organization. Subject to sampling variability.

<sup>b</sup> Starting plants in advance of planting in ground.

Source: U.S. Bureau of the Census, 1995.

Table 6-20. Participation in Gardening: 1992<sup>a</sup>

Item	Adult Population (mil.)	Percentage
Total	185.8	55
Sex:		
Male	89.0	46
Female	96.8	62
Race:		
White	158.8	57
Black	21.1	39
Other	5.9	42
Age:		
18 to 24 years old	24.1	31
25 to 34 years old	42.4	51
35 to 44 years old	39.8	57
45 to 54 years old	27.7	64
55 to 64 years old	21.2	63
65 to 74 years old	18.3	63
75 to 96 years old	12.3	55
Education:		
Grade school	14.3	44
Some high school	18.6	50
High school	69.4	53
graduate	39.2	55
Some college	26.2	61
College graduate	18.1	65
Graduate school		

<sup>a</sup> In percent, except as indicated. Covers activities engaged in at least once in the prior 12 months.

Source: U.S. Bureau of the Census, 1995.

Table 6-21. DIY Home Improvement and Repair Projects Undertaken Within the Past 12 Months<sup>a</sup>

Project	Millions of Households	Percent of DIY Households
Painted the interior of the home	37.5	60.9
Applied weatherstripping or caulking	26.4	43.0
Painted the exterior of the home	20.3	32.9
Varnished or stained woodwork/furniture	19.8	32.2
Repaired electrical wiring or outlets	14.7	23.9
Replaced bathroom faucets	14.2	23.1
Hung wallpaper	14.1	22.9
Repaired or replaced toilet	12.8	20.8
Replaced kitchen faucets	12.7	20.6
Added insulation	12.0	19.5
Repaired drywall	10.5	17.0
Installed carpeting	10.2	16.6
Installed vinyl floor covering	9.3	15.1
Repaired or replaced roof	8.2	13.4
Installed a ceiling fan	8.2	13.4
Installed paneling	7.6	12.3
Did brick or masonry work	5.9	9.6
Installed a bathroom vanity	5.0	8.2
Installed ceiling tile	4.7	7.6
Installed a water heater	4.2	6.9
Installed ceramic tile	3.1	5.0
Installed a kitchen sink	2.9	4.7
Replaced kitchen cabinets	2.3	3.8
Installed exterior siding	2.3	3.7

<sup>a</sup> Between September 1981 and September 1982.

Source: DIYRI, 1983.

Table 6-22. Participation in Various Home Improvement/Repair: 1992<sup>a</sup>

Item	Adult Population (mil.)	Home Improvement/Repair
Total	185.8	48
Sex:		
Male	89.0	53
Female	96.8	42
Race:		
White	158.8	50
Black	21.1	32
Other	5.9	31
Age:		
18 to 24 years old	24.1	33
25 to 34 years old	42.4	47
35 to 44 years old	39.8	58
45 to 54 years old	27.7	57
55 to 64 years old	21.2	53
65 to 74 years old	18.3	42
75 to 96 years old	12.3	20
Education:		
Grade school	14.3	24
Some high school	18.6	34
High school	69.4	47
graduate	39.2	53
Some college	26.2	52
College graduate	18.1	65
Graduate school		

<sup>a</sup> In percent, except as indicated. Covers activities engaged in at least once in the prior 12 months.

Source: U.S. Bureau of the Census, 1995.



Table 6-23. Estimated Populations Involved in Various Hobbies

Hobby	Number of People	Remarks
<b>1. Woodworking</b>		
A. People involved in a leisure woodworking project	13.3 x 10 <sup>6</sup> (6.6% of total U.S. population)	SMRB does not indicate what percentage of this total are specifically involved in other specific woodworking projects.
B. People involved in furniture refinishing	12.2 x 10 <sup>6</sup>	
C. Magazine subscribers <sup>a</sup> (Writers Market, 1985)		
• <i>Hands on</i>	750,000	All four magazines are specifically directed at active amateur woodworkers.
• <i>Woodworker's Journal</i>	100,000	
• <i>Popular Woodwork</i>	10,000	
• <i>Workbench</i>	825,000	
D. Persons who own power tools (SMRB, 1983)		Router is best indicator of number of hobbyists.
• Electric drill	27.4 x 10 <sup>6</sup>	
• Electric router	5.8 x 10 <sup>6</sup>	
• Gas chain saw	11.3 x 10 <sup>6</sup>	
• Electric chain saw	3.3 x 10 <sup>6</sup>	
• Portable electric circular saw	15.1 x 10 <sup>6</sup>	
• Portable jig/sabre saw	13.0 x 10 <sup>6</sup>	
• Stationary radial/arm saw	3.4 x 10 <sup>6</sup>	
• Stationary bench/table circular saw	4.7 x 10 <sup>6</sup>	
• Stationary jig/sabre saw	1.9 x 10 <sup>6</sup>	
• Electric sander	15.0 x 10 <sup>6</sup>	
• Portable workbench	4.1 x 10 <sup>6</sup>	
<b>2. Photography</b>		
A. People who develop their own photographs (SMRB 1983)	6.2 x 10 <sup>6</sup>	Most will be developing black and white film.
B. People participating in photography (SMRB, 1992)	72.2 x 10 <sup>6</sup> (11.5% of total U.S. population)	Participated in last 12 months.
C. Magazine subscribers <sup>a</sup>		Subscribers are people interested in darkroom techniques. Subscribers are advanced amateurs.
• <i>Darkroom Photography Magazine</i>	100,000	
• <i>Darkroom Techniques</i>	40,000	
• <i>Popular Photography</i>	925,000	80% of photo hobbyists are estimated to do black and white developing and 20% color developing.
D. <i>Kodak Consumer Department</i>	1 x 10 <sup>6</sup> 2 x 10 <sup>6</sup>	

Table 6-23. Estimated Populations Involved in Various Hobbies (Continued)

Hobby	Number of People	Remarks
<b>3. Lapidary Work</b>		
• No population data found		
<b>4. Glass/crystal working</b>		
A. Magazine subscribers <sup>a</sup>		
• <i>Glass Craft News</i>	40,000	Subscribers are stained-glass hobbyists.
<b>5. Textile and fiber dyeing</b>		
A. Magazine subscribers <sup>a</sup>		
• <i>Handweaver</i>	25,000	Practicing weavers and dyers (includes some professionals).
• <i>Shuttle Spindle and Dyepot</i>	16,000	Practicing weavers and dyers (may include some professionals).
• <i>Spin-off</i>	6,000	Practicing spinners and dyers (may include some professionals).
<b>6. Painting and drawing</b>		
A. People who paint, draw, or sculpt (SMRB, 1983)	13.7 x 10 <sup>6</sup>	
B. People participating in painting, drawing, sculpturing (SMRB, 1992)	12.1 x 10 <sup>6</sup>	
C. Magazine subscribers <sup>a</sup>		
• <i>Art and Artists</i>	1,000	Subscribers are people interested in oil pastel.
• <i>Artist's Magazine</i>	110,000	Subscribers are serious amateurs.
<b>7. Metalworking</b>		
A. Magazine subscribers (Writers Market, 1985)		
• <i>Home Shop Machinist</i>	19,000	Subscribers include hobbyists active in sheetmetal work, machining, welding, and foundry.
• <i>Live Steam</i>	12,800	Subscribers include hobbyists active in constructing scale locomotives and other steam engineers.
<b>8. Printing</b>		
• No population data found		
<b>9. Pottery and ceramics</b>		
A. People participating in ceramics/pottery	4.4 x 10 <sup>6</sup> (1.6% of total U.S. population)	
B. Magazine subscribers		
• <i>American Ceramics</i>	3,200	Subscribers may be collectors as well as makers; the actual population is probably much greater.
<b>10. Scale Models</b>		

(continued on next page)

Table 6-23. Estimated Populations Involved in Various Hobbies (Continued)

	Hobby	Number of People	Remarks
A.	People participating in model building/miniature projects (SMRB, 1992)	4.9 x 10 <sup>6</sup> (2.7% of total U.S. population)	
B.	People participating in model railroading (SMRB, 1992)	2.5 x 10 <sup>6</sup>	
C.	Magazine subscribers <sup>a</sup> (Writers Market 1985)		
	• <i>Railroad Model Craftsman</i>	97,000	Most subscribers to railroad models thought to be collectors rather than builders.
	• <i>Finescale Modeler</i>	30,000	
	• <i>Mainline Modeler</i>	14,000	
	• <i>Model Railroader</i>	178,000	
D.	People who build model airplanes	300,000-400,000	<i>Model Aircraft</i> ; these are functional models.
11.	<b>Hunting and firearms</b>		
A.	Persons who own guns (SMRB, 1983)		
	• Hunting rifle	24.4 x 10 <sup>6</sup>	
	• Shooting rifle	22.2 x 10 <sup>6</sup>	
	• Target gun	9.6 x 10 <sup>6</sup>	
	• Factory-loaded ammunition	18.9 x 10 <sup>6</sup>	
B.	Persons who have engaged in firearms-related hobby within the past year (SMRB, 1983)		
	• Hunting	12.6	
	• Target shooting	7.4	
C.	Magazine subscribers <sup>a</sup>		
	• <i>American Hunter</i>	150,000	
	• <i>Guns &amp; Ammo</i>	475,000	
	• <i>Shotgun Sports</i>	105,000	
	• <i>American Marksman</i>	8,000	
	• <i>American Shotgunner</i>	120,000	
	• <i>Guns Magazine</i>	135,000	
12.	<b>Leather Work</b>		
A.	Magazine subscribers		
	• <i>Make It with Leather</i>	60,000	Subscribers are hobbyists who cut and carve leather (which has presumably already been treated and dyed) therefore, potentially exposed to tanning agents and dye.

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Table 6-23. Estimated Populations Involved in Various Hobbies (Continued)

	Hobby	Number of People	Remarks
<b>13.</b>	<b>Needlework and fiber arts</b>		
A.	Persons who sew or do other needlework as a hobby (SMRB, 1983)	29.1 x 10 <sup>6</sup>	This probably includes only persons exposed to dyes through handling material or threads already dyed.
B.	Magazine subscribers <sup>a</sup>		
	• <i>Needle and Thread</i>	750,000	Subscribers are users of already-dyed materials. However, some dye may potentially leach from thread.
	• <i>Needlecraft for Today</i>	1,200,000	
<b>14.</b>	<b>Boat builders</b>		
A.	People who build their own boats	20,000	Devlin Boat Building, Co.; approximately 20,000 people a year are involved in building their own boats.
<b>15.</b>	<b>Plane builders</b>		
A.	People who build their own planes	20,000	Homebuilt Experimental Aircraft Association.
<b>16.</b>	<b>Jewelry making</b>		
A.	People participating in jewelry making (SMRB, 1992)	2.8 x 10 <sup>6</sup> (1.6% of total U.S. population)	

<sup>a</sup> Assumed that persons who subscribe to the hobbyist-type magazines are persons involved/interested in that specific hobby. A percentage of this population can be used to estimate the potentially susceptible or exposed population.

Source: SMRB, 1983; U.S. EPA, 1985; Writers Market, 1985; SMRB, 1992.

Table 6-24. Participation in Selected Sports Activities: 1993<sup>a</sup>

Activity	All Persons		Sex		Age									Yearly Household Income (\$)				
	Number	Rank	Male	Female	7-11 yrs	12-17 yrs	18-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65 yrs and over	Under 15,000	15,000 0-24,999	25,000 0-34,999	35,000 0-49,999	50,000 0-74,999	75,000 and over
<b>Total</b>	230,406	(X) <sup>b</sup>	111,851	118,555	18,561	21,304	25,650	41,808	40,761	28,644	20,922	32,758	45,150	36,221	33,971	43,701	46,189	25,175
Number participated in																		
Aerobic exercising <sup>c</sup>	24,886	9	3,527	21,359	647	1,837	4,852	7,514	4,996	2,610	1,181	1,250	3,172	3,092	3,692	5,012	6,299	3,618
Backpacking <sup>d</sup>	9,229	24	6,196	3,033	779	1,280	1,501	2,477	2,067	850	170	104	1,424	1,291	1,207	1,817	2,174	1,316
Baseball	16,682	16	13,451	3,232	5,422	5,283	1,834	1,724	1,658	511	87	164	2,499	2,001	2,440	3,832	4,070	1,840
Basketball	29,631	8	21,332	8,299	5,751	9,361	5,305	4,766	3,257	857	146	189	4,163	3,750	4,935	6,254	6,963	3,566
Bicycle riding <sup>c</sup>	47,918	3	24,562	23,357	11,204	8,794	4,551	8,808	6,980	3,441	2,030	2,111	6,897	6,449	6,685	10,606	10,393	6,888
Bowling	41,305	6	20,714	20,591	3,890	5,039	7,222	9,484	7,625	3,919	1,716	2,410	6,684	6,207	6,487	8,498	9,084	4,346
Calisthenics <sup>c</sup>	10,800	21	4,571	6,230	1,132	2,024	1,508	1,824	1,712	1,099	657	844	2,698	1,202	1,422	2,319	2,540	1,619
Camping <sup>e</sup>	42,698	5	23,165	19,533	5,302	5,336	4,767	10,000	8,580	4,135	2,355	2,224	7,182	7,275	6,277	9,338	8,452	4,175
Exercise walking <sup>c</sup>	64,427	1	21,054	43,373	1,848	2,816	5,690	12,525	14,045	10,185	7,782	9,536	10,491	9,802	9,807	12,325	13,593	8,409
Exercising w. equipment <sup>c</sup>	34,900	7	16,901	17,999	425	3,025	6,595	9,105	7,065	4,257	2,217	2,210	3,915	3,948	4,639	7,305	9,412	5,681
Fishing-freshwater	45,333	4	30,449	14,885	4,623	4,945	4,946	9,913	9,561	5,044	3,156	3,146	8,891	7,190	7,158	9,470	9,251	3,373
Fishing-saltwater	12,079	20	8,337	3,743	938	882	1,358	2,276	2,593	1,603	1,251	1,178	2,182	2,002	1,344	2,286	2,833	1,432
Football	14,712	17	12,879	1,843	2,495	5,227	3,410	2,203	1,032	202	94	60	2,457	2,295	2,263	2,813	3,105	1,790
Golf	22,633	10	17,212	5,421	840	1,692	3,074	5,192	4,620	3,180	1,956	2,080	1,439	1,925	2,668	4,159	7,342	5,100
Hiking	19,462	13	10,741	8,721	1,851	2,439	2,224	4,604	4,358	1,873	1,035	1,078	2,717	2,964	2,884	3,530	4,314	3,052
Hunting w. firearms	18,455	14	16,303	2,152	540	1,695	2,575	4,658	4,282	2,380	1,311	1,014	3,234	2,814	3,555	3,939	3,473	1,40
Racquetball	5,407	25	4,161	1,246	162	550	1,704	1,590	936	380	71	15	705	597	595	1,197	1,592	722
Running/jogging <sup>c</sup>	20,283	12	11,429	8,854	1,727	4,008	4,088	4,393	3,489	1,566	680	331	2,795	2,364	2,506	4,047	5,104	3,468
Skiing-alpine/downhill	10,495	22	6,462	4,033	453	1,549	2,766	2,807	1,698	921	230	70	552	734	930	1,763	3,365	3,150
Skiing-cross country	3,727	26	1,738	1,989	298	469	273	530	1,084	580	314	179	291	317	463	718	1,064	874

(continued on next page)

Table 6-24. Participation in Selected Sports Activities: 1993<sup>a</sup> (continued)

Activity	All Persons		Sex		Age								Yearly Household Income (\$)					
	Number	Rank	Male	Female	7-11	12-17	18-24	25-34	35-44	45-54	55-64	65 yrs and over	Under 15,000	15,000 0-	25,000 0-	35,000 0-	50,000 0-	75,000 and over
					yrs	yrs	yrs	yrs	yrs	yrs	yrs			24,999	34,999	49,999	74,999	
<b>Total</b>	230,406	(X) <sup>b</sup>	111,851	118,555	18,561	21,304	25,650	41,808	40,761	28,644	20,922	32,758	45,150	36,221	33,971	43,701	46,189	25,175
Soccer	10,273	23	6,509	3,764	4,543	3,063	889	839	626	254	51	9	1,247	925	1,126	2,387	2,927	1,661
Softball	17,943	15	10,426	7,517	2,886	3,817	3,101	4,446	2,813	532	191	157	2,173	2,335	2,758	3,789	4,530	2,358
Swimming <sup>c</sup>	61,353	2	27,713	33,640	10,507	10,874	7,860	11,293	10,075	4,941	2,756	3,047	8,545	7,936	8,817	13,054	14,284	8,717
Target shooting	12,804	19	10,195	2,609	746	1,640	2,057	3,288	2,723	1,345	546	459	2,086	1,916	2,175	2,877	2,283	1,468
Tennis	14,197	18	8,302	5,896	1,003	2,464	3,375	3,076	2,357	1,091	558	274	2,669	1,390	1,752	2,586	3,758	3,043
Volleyball	20,477	11	9,777	10,700	1,333	5,443	4,402	4,961	3,150	823	252	112	2,890	2,500	3,226	4,289	5,036	2,536

<sup>a</sup> In thousands, except rank. For persons 7 years of age or older. Except as indicated, a participant plays a sport more than once in the year. Based on a sampling of 10,000 households.

<sup>b</sup> Not applicable.

<sup>c</sup> Participant engaged in activity at least six times in the year.

<sup>d</sup> Includes wilderness camping.

<sup>e</sup> Vacation/overnight.

Source: U.S. Bureau of the Census, 1995.

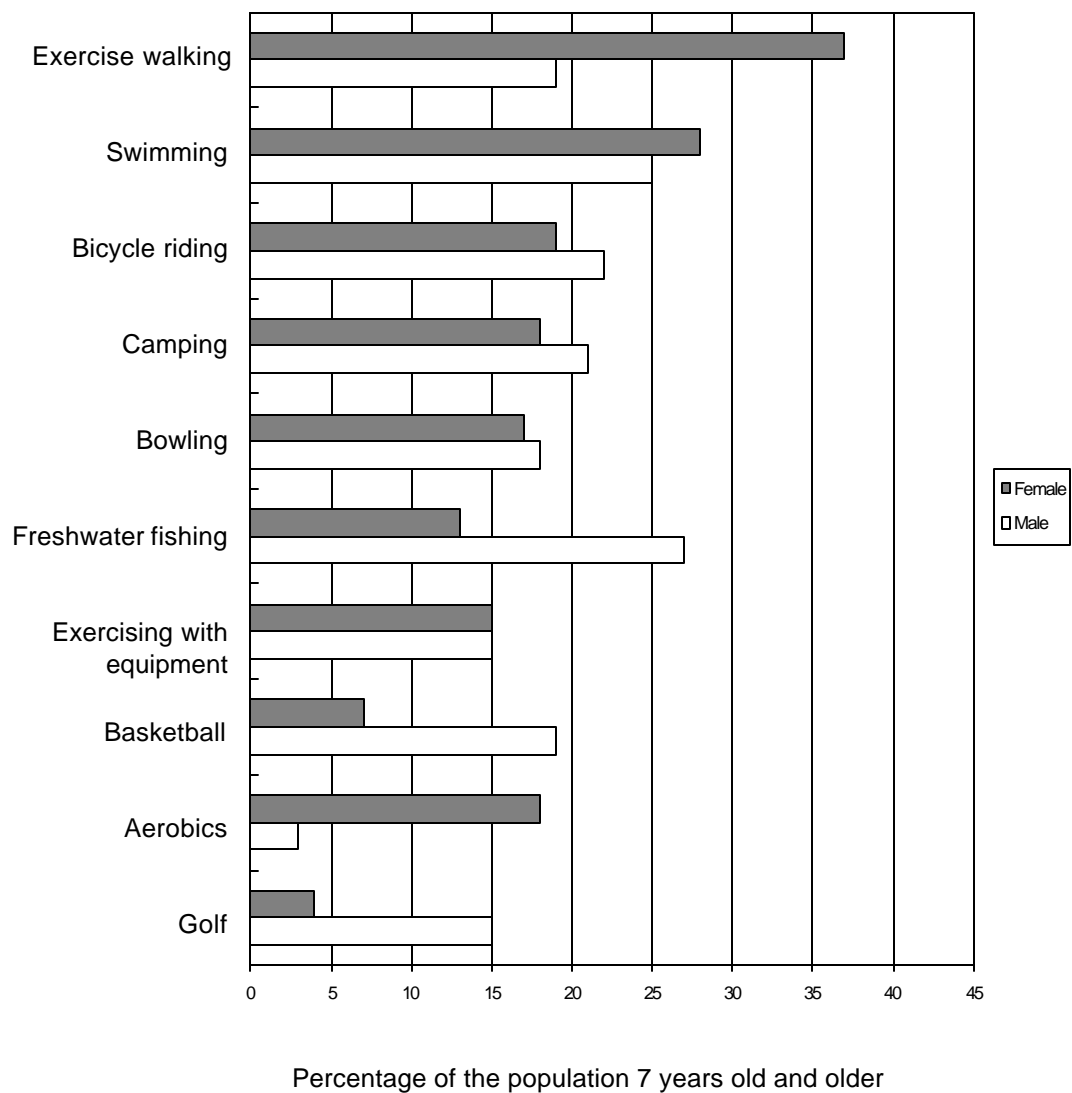


Figure 6-1. Participation in the 10 Most Popular Sports Activities by Sex: 1993

Source: U.S. Bureau of the Census, 1995.

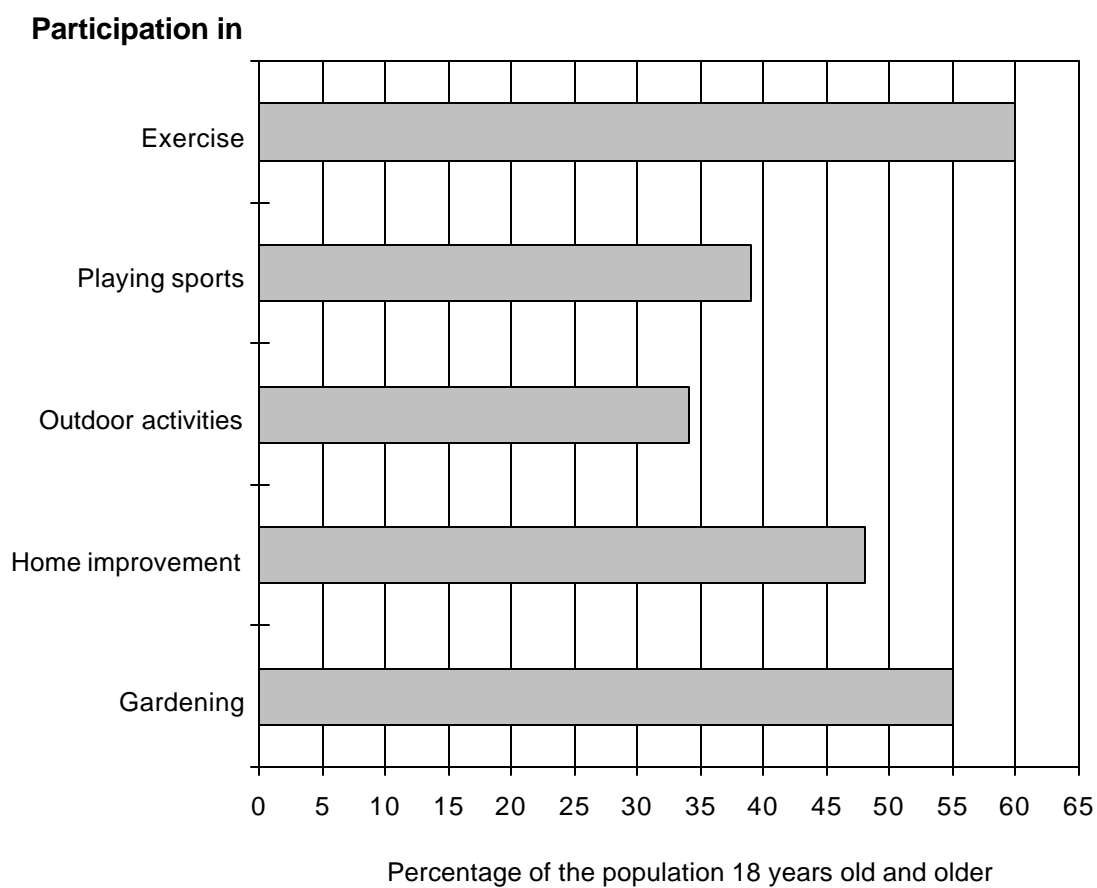


Figure 6-2. Participation in Various Activities by Percentage of the Population  
18 Years Old and Older: 1992

Source: U.S. Bureau of the Census, 1995.